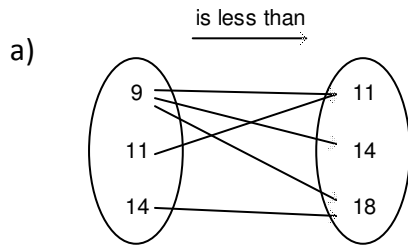


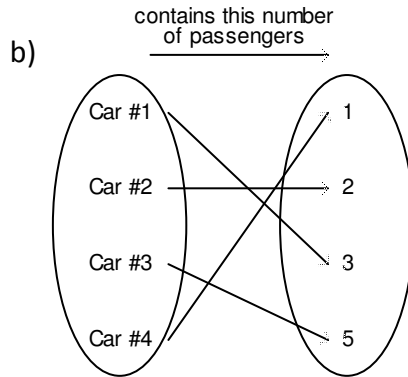
1. The table below shows English words and the number of letters in the word.

Words	Letters
Dog	3
Horse	5
Elephant	8
Pig	3

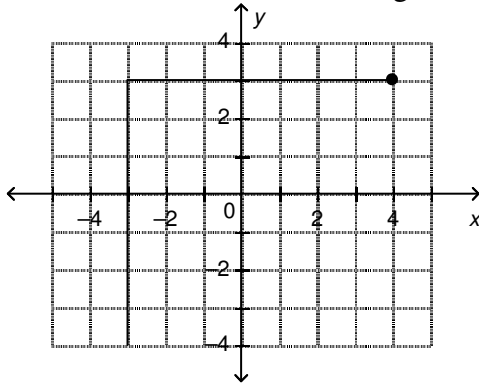
- a) Describe the relation in words. (1 mark)
- b) Represent the relation as a set of ordered pairs. (2 marks)
- c) Represent the relation as an arrow diagram. (2 marks)
2. Looking back at question #1, write out the domain and range for the relation. (2 marks)
3. Which of the following represent a function? (2 marks)
(Put Function or Not a Function in blanks)
- a) $\{(3, 4), (2, 4), (1, 5)\}$ _____
- b) $\{(2, 1), (2, 2), (3, 1), (3, 2)\}$ _____

4. Which of the following represent a function? (2 marks)
(Put Function or Not a Function in blanks)





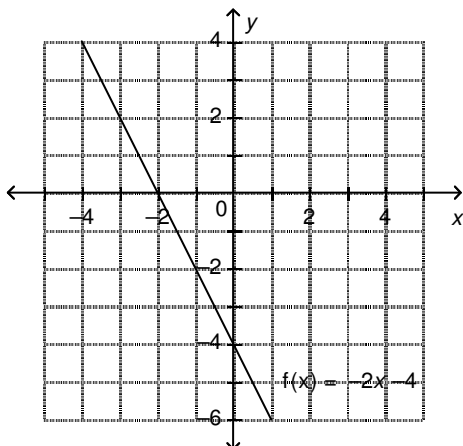
5. Determine the domain and range of this graph. (3 marks)



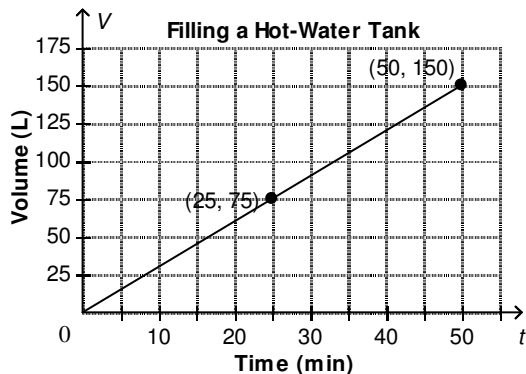
Domain:

Range:

6. This is a graph of the function $f(x) = -2x - 4$. Determine the domain value when the range value is -2 . (1 mark)



7. This graph represents a 150-L hot-water tank being filled at a constant rate. Determine the rate of change of the relation. (2 marks)



8. The altitude of a plane, a metres, is related to the time, t minutes, that has elapsed since it started its ascent. Determine the rate of change of this linear relation. (2 marks)

t (min)	0	2	4	6	8
a (m)	4000	5400	6800	8200	9600

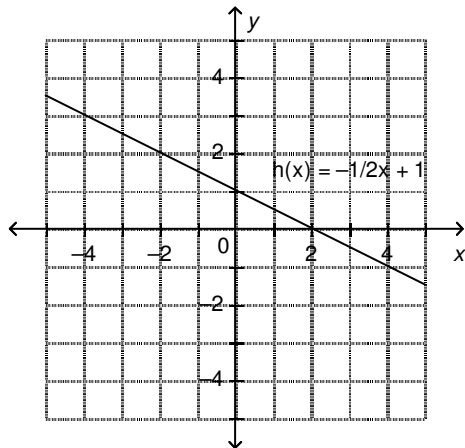
9. Given the equation $y = 2x + 3$, find the rate of change for this relation. (2 marks)
(Hint: you may want to make a table of values to help answer this question!)

10. Which set of ordered pairs represents a linear relation? (2 marks)
(Put Linear Relation or Not a Linear Relation in the blanks.)

a) $\{(5, 10), (6, 20), (7, 40)\}$ _____

b) $\{(30, 10), (20, 20), (10, 30)\}$ _____

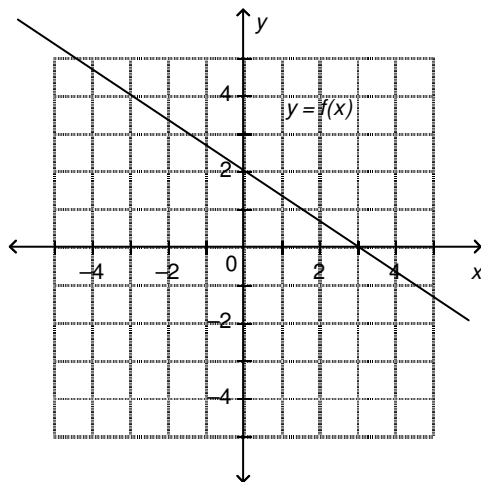
11. This is a graph of the function $h(x) = -\frac{1}{2}x + 1$. (2 marks)



a) Determine the range value when the domain value is -2 . _____

b) Determine the domain value when the range value is -1 . _____

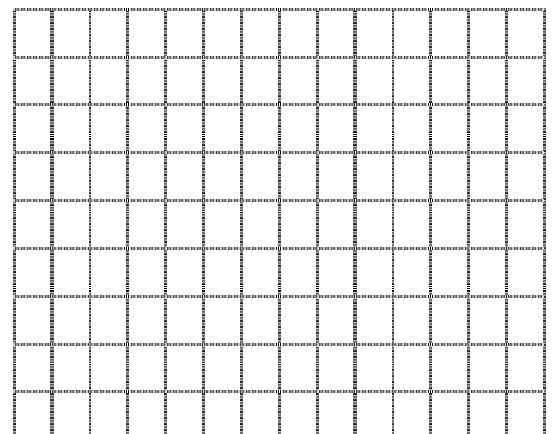
12. Determine the vertical and horizontal intercepts of this graph. (2 marks)



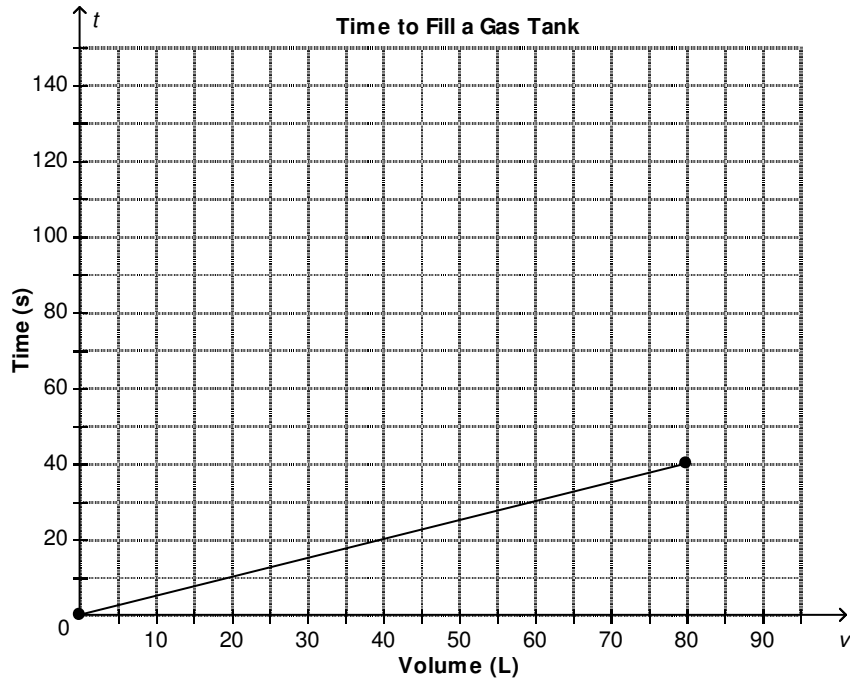
13. For this table of values, (3 marks)

- Graph the data. Will you join the points? Justify your answer.
- Does the graph represent a function? Explain.

People, n	Cost, C (\$)
15	0.50
30	1.00
60	2.00
90	3.00
120	4.00



14. This graph shows the time it takes to fill a gas tank from empty.



a) Determine the rate of change. (2 marks)

b) Write the domain and range. (2 marks)

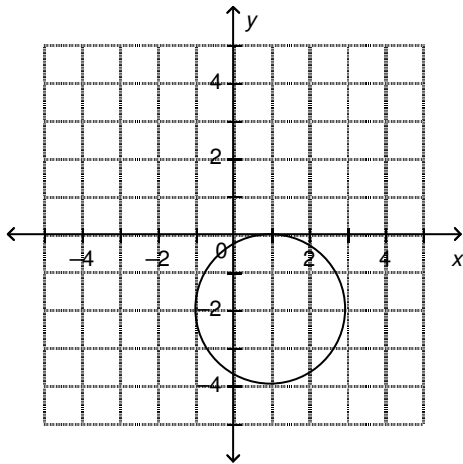
c) About how long will it take to fill a 45-L gas tank? (1 mark)

15. Given $f(x) = 4x - 10$, (2 marks)

a) find $f(3)$

b) find x , if $f(x) = 42$

16. Identify the domain and range of the following graph. (3 marks)

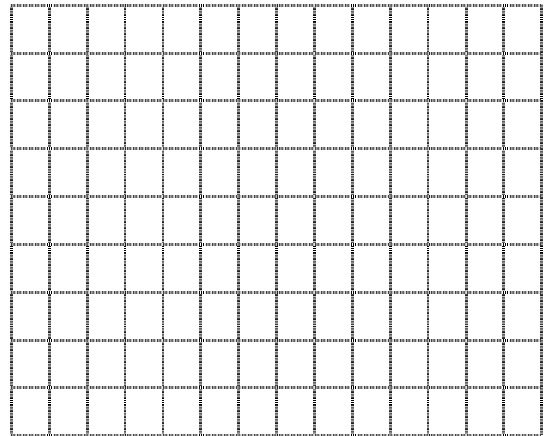


Domain:

Range:

17. Given the equation $y = 3x + 5$,

a) Create a table of values and graph the data. (3 marks)



b) What is the rate of change? (1 mark)

18. Gail leaves the house for her morning jog. She stops for a quick drink, and then continues jogging before stopping again to chat with a friend. She then jogs back home. Draw a graph of her distance in kilometers from home as a function of time in minutes. (3 marks)